

# The ICT Literacy Level of EFL Students at IAIN Syekh Nurjati Cirebon

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**Abstrak.** Pandemic era effects to the teaching and learning English process. It also forces students to use laptop and gadget in joining the class and completing the assignments. Information and Communication Technology Literacy (ICTL) is essential for EFL students in facilitating their daily activities in studies. The students' engagement with technology can illustrate their ICTL level. This research aims to explain the ICTL level of EFL students at IAIN Syekh Nurjati Cirebon. The method of analysis for this purpose is a descriptive survey analysis. The participants of this study are 6<sup>th</sup> semester students. The data is collected through questionnaires. The data will be collected and analyzed through the theory proposed by ICTL Panel 2007. The data was analyzed in percentages, frequency counts, and make conclusions. The finding showed that the level of ICTL of EFL students at IAIN Syekh Nurjati was high cognitively and practically. It can be seen that the means score of cognitive proficiency was 80.82%. Moreover, the data of students' practical proficiency was 75.62%. Based on the data above, it can be said that the students are ICT literate and have high competency using technology.

**Key words:** ICTL level, EFL students, descriptive survey, high competency

**How to Cite:** Waloyo, E., Hartono, R., Wahyuni, S., Yulianto, H.J. (2022). The ICT Literacy Level of EFL Students at IAIN Syekh Nurjati Cirebon. *ISSET: International Conference on Science, Education and Technology* (2022), 612-617.

## INTRODUCTION

ICTL is skill which is required in the pandemic era and nowadays in every aspect of life. In education, teachers, lecturers and students are forced to learn ICT in teaching and learning process. The rapid use of ICT influences the way students in learning inside and outside the classroom because technology facilitates and helps students in doing communication with the teachers and completing their tasks of the subjects. ICT is defined as the ability to use digital technology, communications tools, and/or networks to access, manage, integrate, evaluate, and produce information in order to function in a knowledge society (ICT Literacy Panel, 2002). In the realm of education, information and communication technology (ICT) refers to systems that allow for the collection, modification, management, access, and transfer of data in various formats (Yunus et al., 2013).

ICT also plays important role in the success in stimulating students in teaching and learning activities. Purnamawati et.al (2019) stated that the use of ICT in education has an impact on the creation of active, enjoyable learning activities that motivate students to participate actively. The use of ICT in the learning process, as well as the use of ICT in learning, has now become a requirement that every school must follow. Furthermore, one of the most important components in the success of technology-based

teaching and learning is teacher preparation that includes ICT tools and facilities (Sangrà & González, 2010; Eady & Lockyer, 2013; Ghavifekr & Rosdy, 2015; Deebom & Zite, 2016; Mas'ud & Surjono, 2018). It is clear that teacher has important role in the implementation of ICT and guide students to be familiar with it in the process of teaching and learning. When the teacher introduces and teaches students how to use ICT in learning context, the students will get advantages of mastering ICT in supporting their learning progress.

The use of ICTL in the classroom setting can improve students critical thinking. Students' critical thinking skills can be improved through e-handouts aided by PBL models on Edmodo. It is sufficient to use an e-handout in conjunction with the PBL paradigm and Edmodo to improve students' ICT literacy (Tania et al., 2020). A study from (Indana et al., 2020) showed that learning material using an ICT-based guided inquiry paradigm was successful in developing critical thinking skills and science literacy in junior high school pupils. Online learning with ICT-oriented PBL approach teaching materials and ICT-oriented HOTS evaluation instruments can help students improve their critical thinking and communication abilities (Isnaeni et al., 2021). Moreover, ICT Media Assisted Problem Based Learning successfully improved students' critical thinking abilities, as measured by their ability to ask questions, give arguments, collect

and compose information, analyze situations, and make decisions and conclusions (Nirbita et al., 2018).

In teaching and learning process, ICTL can be applied in teaching writing. The use of ICT in the teaching of ESL writing was very low and the teachers are generally weak in managing problems and planning activities involving the use of ICT in the teaching of ESL writing (Yunus et al., 2013). The research findings from (Supriyadi et al., 2020) revealed that the students' writing flaws included lack of originality, citing sources that were not representative or credible, and inconsistencies between in-text citation and reference list. Integrating ICTs and social media had a positive impact on students' writing abilities. Furthermore, the undergraduates are pleased with the prospective outcomes of combining ICT and social media in the development of writing skills (Bakeer, 2018). In academic writing, students were able to follow the directions and write correctly. They could not keep the plagiarism they were expected to keep, but the majority of them were able to keep it under 40%, which was fairly encouraging for their first effort in such a short period of time. They were enthusiastic about using ICT, and the investigation revealed a welcoming indicator of interest among them (Rana & Tuba, 2015).

Furthermore, the study of ICTL in teaching learning process have done by some researchers. The research finding of Ivankovic et al., (2013) showed that Students who spend more time at the computer demonstrate higher levels of ICT literacy. However, the question is how can the time spent on the computer be an actual predictor of ICT literacy, taking into consideration that 80.92% of the respondents use computers for Internet surfing. Ogwu & Ogwu (2016) investigated the level of ICT competency among final year teacher training students at the University of Botswana, finding that their computer skills were woefully inadequate. ICTs have substantially increased and broadened the influence and skillfulness of its users in terms of electronic information searching (Davies, 2011). Globally, ICT literacy skills are important instruments for self-actualization (Olatoye et al., 2021). According to Makori (2016),

technological advancements include the use of classroom computers, instructional software to teach academic syllabi, and library and academic materials being made available to undergraduates via the Internet; however, some undergraduate students in universities are unable to operate a computer system without assistance, even to the point of requiring assistance to send an e-mail. Ukachi (2015) stated that computer proficiency is not the sole ICT skill necessary in the exploitation of information posted on the Internet. It is necessary to be ICT literate in order to take benefit of Internet materials.

Those previous research finding inspire the researcher to conduct research that analyzing EFL students ICTL level at IAIN Syekh Nurjati Cirebon. The participants are the 6<sup>th</sup> semester students who are familiar with technology in helping their daily activities. The students always close with technology in joining class session and accessing the information from the internet. So, the researcher wants to analyze how is students ICTL level. This topic is selected because based on the discussion of the previous study, this topic has not discussed especially for analyzing ICTL level of EFL students in West Java.

## METHODS

For this investigation, a descriptive survey was used. A descriptive survey approach allows a researcher to ask a series of questions to consenting participants, summarize their responses with percentages, frequency counts, and make conclusions about a specific community based on the sample's responses (Bryman, 2004). The respondents of this research are 6<sup>th</sup> semester student at IAIN Syekh Nurjati Cirebon. The total population of the respondents are 180 students and the sample of this research is 20% of the respondents. The ICTL questionnaire is made up of 15 items on a 5-point Likert scale. There are two constructs in this questionnaire: ICTL cognitive proficiency and ICTL practical proficiency. Each factor is rated on a 5-point Likert scale, with 1 being "strongly disagree" and 5 being "strongly agree." According to ICT Literacy Panel. (2002), researcher used ICTL assessment as Table:

**Table 1.** ICT Literacy Assessment

	Low Technical Proficiency	High Technical Proficiency
High Cognitive Proficiency	A	B
Low Cognitive Proficiency	C	D

Based on the table above, this research classified the level of the student's literacy consisted of High Cognitive Proficiency, Low Cognitive Proficiency, High Technical Proficiency, and Low Technical Proficiency. The letter "A" indicates Low Technical Proficiency and High Cognitive Proficiency. The letter "B" refers to High Technical Proficiency and High Cognitive Proficiency. "C" letter indicates Low Cognitive Proficiency and Low Technical Proficiency. "D" letter refers to Low Cognitive Proficiency and High Technical Proficiency. The data from survey categorized into two categories as follows: the percentages score 1-50% refers to low technical and cognitive proficiency and the percentages score 51-100% refers to high practical and cognitive proficiency.

## RESULTS AND DISCUSSION

The research distributed the survey to 42 respondents who agreed to complete the form of the questionnaire. In this finding, the research finding displayed in the form of percentage of the level of EFL students ICT literacy. The ICT

Literacy level can be seen from the cognitive and practical proficiency based on the way to access, manage, integrate, evaluate, and create information. The display of the research finding serves in the table which describes the level of cognitive and practical proficiency level of ICT Literacy in the percentages.

### The ICT Literacy Level based on the Cognitive Proficiency

The result finding of the survey that was shared to the 6<sup>th</sup> semester students covered some questions related to ICT Literacy components. The students were asked to answer the questions regarding to their activities in using technology to look for information. The question consisted of the students' activities in accessing, managing, integrating, evaluating, and creating information using technology tools or applications. The survey was shared to 42 students as the sample of the population of 6<sup>th</sup> semester students. The data from the survey analyzed into percentages and categorized into low competency and high competency.

**Table 2.** The Cognitive Proficiency of ICT Literacy

No	ICT Literacy Components	Low Competency (%)	High Competency (%)
1	Access	2.4	97.6
2	Manage	17.3	82.7
3	Integrate	26.2	73.8
4	Evaluate	23.8	76.2
5	Create	26.2	73.8

The table 2 described the level of Students' ICT Literacy level based on the cognitive proficiency. The data showed that most of students are familiar in accessing information from the internet. The total respondents 97.6% indicates that the students active in searching information from internet and categorized having high competency. The 2.4 % data from respondents showed that only little students reluctant to access information. Then, the data of students' proficiency in managing information showed 82.7%. It indicates that the students used to manage the information they get and 17% data showed that students reluctant to manage the information. In integrating information, it refers to the students' activities in making summary, comparing, and contrasting information they get. The data showed 73.8% total respondents indicated that they have high cognitive proficiency.

Moreover, the students' ICTL level in

evaluate component was 76.2% which indicated that they were familiar with assessing the quality of information, the relevancy of the information, and the usefulness of the information. Those activities indicated that the students had high proficiency level of cognitive proficiency in ICTL level. The 23.8% respondent showed they did not often to evaluate the information they get from the internet through the technology. The last component of ICTL is create proficiency. The data collected show that 73.8% students use the information they get from the internet to create new information. It means that students do adapting, applying, designing, inventing new information related to their topic interest.

In sum, the data showed the students' level of ICT Literacy based on cognitive proficiency indicated in high percentages. The mean score of cognitive proficiency of ICT literacy was 80.82%. It means that students familiar with the information from internet in term of accessing,

managing, integrating, evaluating and creating information. It is in line with the research finding conducted by Ogwu & Ogwu (2016) who claimed that the level of university level was inadequate. It happens because students usually use internet in searching information for completing their task. Ivankovic et al., (2013) added that students who spent a lot of time in front of computer or laptop had high ICTL level. It can be concluded when university students spend their time more often in front of laptop or computer, they can improve their ICTL level.

### **The ICT Literacy Level based on the Practical Proficiency**

Practical proficiency relates to the knowledge of hardware, software, application, network, and elements of digital technology. The questions delivered to students focus on the use of

application and hardware. The questions based on the ICTL components which refers to the students' activities in using hardware and application to access, manage, integrate, evaluate, and create information. The survey was shared to 42 students as the sample of the population of 6<sup>th</sup> semester students. The data from the survey analysed into percentages and categorized into low competency and high competency. In analysing the practical proficiency of ICTL, the data taken from the students' response to the ICTL components. The data analysed and classified into low competency and high competency. In categorizing the low and high competency the data classified into the range 1-50 % refers to low competency while 51-100 refers to high competency.

**Table 3.** The Practical Proficiency of ICT Literacy

No	ICT Literacy Components	Low Competency (%)	High Competency (%)
1	Access	4.8	95.2
2	Manage	35.8	64.2
3	Integrate	29.7	70.3
4	Evaluate	28.8	72.2
5	Create	23.8	76.2

The data from the table 3 above showed that the students' ICTL level was high based on the practical proficiency. The finding has shown that 95% respondents had high competency in using technology in accessing information through google search and computer/laptop. The students who did not use computer/laptop was 4.8% in searching information. It was possible happened because they did not have laptop or data to access internet. Then, based on the data of management, students did not always classify the information in their laptop/computer. It can be seen that 35.8% students were not familiar in organizing the information file in folder. Surprisingly, there were 64.2% students organized their information file in their computer. Organizing information is useful for students because they can easily to find the information needed when they want it again.

Furthermore, the students were aware in comparing, and summarizing the information they get from internet before they quote it or delivered it to others. It can be seen that 70.3% students were consistent in administered the information by integrating some information they need. Besides, they also evaluate the quality of the information by analyzing the sources. The

data showed that 72.2% students were able to see the relevancy and usefulness of the information they were collected. There were 28.8% students did not pay attention the quality, relevancy and usefulness of the information. In addition, the data also explained that 76.2% created new information based on the information they had analyzed.

It can be concluded that the means score of ICTL level-based on the practical proficiency was 75.62%. It indicates they often use technology in their daily activities in searching information or looking for data. Moreover, it can be said that the students have high level of ICTL based on practical proficiency. This finding supported the statement from Yunus who claimed that ICT help the students in accessing, collecting, managing, modifying, and sharing the information (Yunus et al., 2013). Moreover, this finding in line with Davies' statement who claimed that ICTL influences the student's skill in using technology in searching or collecting the data from internet (Davies, 2011). It is clear that when students have good knowledge of ICT in their daily activities, it will influence they use technology in helping in accessing information, managing information, integrating information,

evaluating information, and creating information.

## CONCLUSION

ICTL is essential for the students in this era because the development of technology happens unstoppable. This condition forces the teachers and students should be familiar in using technology and searching information or data from the internet. The teachers and students who do not adaptive to the development of technology will be left behind or cannot improve their competency. Based on the research finding, the 6<sup>th</sup> semester students at IAIN Syekh Nurjati Cirebon have high ICTL level based on cognitive proficiency and practical proficiency. This data is useful for the lecturers regarding to the way they teach students, choose media, and evaluate their students' task. The researcher suggests for the further research to conduct the research related to the challenges in using ICT in the learning process.

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